7: Gulick E-5 (1952) 1955 ME1 Lebanon ME1

THE GENERAL ENVIRONMENT

PHYSICAL SETTING

IN Permian times, the land which is now Lebanon was submerged under the great, warm "Tethys Ocean" whose waters washed the shores of two nearby forelands of "Gondwanaland." These forelands are now Arabia and Egypt. From early Cretaceous to late Pliocene times, tremendous deposits of the remains of marine fauna were laid down on the floor of the ocean. The period of deposition was followed by a period of uplift during which the ocean floor was raised thousands of feet above the level of the sea which is now called Mediterranean. Subsequent faulting and folding completed the creation of the present topography of the eastern shore of the Mediterranean (Fisher, 1950, pp. 11–12). This consists, essentially, of two roughly parallel ranges of mountains and hills, divided by a rift system, which extend from the plain of Homs in Syria to the Gulf of Aqaba in the Red Sea. This mountain system steadily decreases in altitude from Lebanon in the north to the Negeb in the south, where it is hardly perceptible. 33

Mount Lebanon rises abruptly from the sea and attains, at one point, an altitude of over 10,000 feet, maintaining an average of about 6000 feet. There are fairly extensive coastal plains inland from Sidon and Tyre, in the Kura district near Tripoli, and, especially, in the Akkar, most of which actually belongs to Syria. Elsewhere, however, it is often only a matter of technicality to say that there is any appreciable coastal plain at all, and one of the least favored districts in this respect is al-Qurnā, which is the locus of this study.

The climate of Lebanon is basically the classic, Mediterranean type which features chilly, rainy winters and hot, rainless summers. Mt. Lebanon itself effects a number of modifications in this yearly cycle. The high slopes catch the clouds which are swept in by the prevailing winter westerlies and force them to drop a large part of their moisture. As a result, the annual precipitation (rain below about 5000 feet, snow above it) ranges between about twenty and forty inches (Fisher, 1950, p. 345). Annual averages give a false picture of reality because the precipitation from year to year is highly variable (Fisher, 1950, p. 50). For example, in the winter of 1950–51, twenty-two inches fell at Beirut, while in 1951–52, forty-two inches fell. Precipitation is concentrated in the months from November to April, but within that period it is capricious. It is not unusual to have one day of cloudbursts immediately followed by one of clear skies. Even in the wettest month (January), there are only fourteen to seventeen rainy days 32

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(Fisher, 1950, p. 50). From May through October, there is no precipitation at all, except at the beginning and the end of the period.

Along the coast, up to about 1500 feet at least, freezing temperatures in winter are of very rare occurrence, but snow covers the higher slopes continuously during the winter. Patches of it on the summits even defy the broiling sun of August.

At Beirut the average summer temperature is 82°F., and it is frequently oppressively humid (Fisher, 1950, p. 42). In al-Qurnā, as in Beirut, there is no snow in winter, but the district is somewhat cooler and less humid than the city in summer.

Lebanon, as a whole, is obviously a well-watered country, but its geological structure has led to an over-abundance of water in some districts and a dearth of it in others. Mt. Lebanon consists, essentially, of two thick layers of Jurassic and Cretaceous limestone, interspersed with a layer of sands and clays. Rain water and snow-melt either run off directly or sink through permeable upper strata to emerge as springs at lower levels, especially at between 3000 and 5000 feet, where their downward seepage is blocked by impermeable strata below (Fisher, 1950, p. 374). The abundance of spring water in high mountain fastnesses is the primary reason for Lebanon's having been so popular as a refuge area for sect groups escaping from persecution.

The drainage system of the country is clearly seen on the map of Lebanon (Fig. 1). The eastern slopes are drained by the large rivers, Litani and Orontes. The western slopes are drained by a series of small rivers whose courses drop from 5000 to 4000 feet to sea level in distances rarely exceeding fifteen miles. The erosion pattern is what one might expect. The small rivers have cut very steep, high banks, nothing less than deep gorges in many cases. Culturally, this is important for at least three reasons: The gorges have made north-south travel very difficult. It has been impossible to use river water for extensive irrigation except, in very recent years, near the mouths of the rivers. The spectacular scenery has added inspiration to the love of the Lebanese for their country, and it attracts many foreign tourists every summer. Water erosion has also created innumerable caves (used both by Stone Age man and latter-day troglodites), a large natural bridge, and at least one horrendous underground river (reputed to be the original River Styx) which has not yet been fully explored.

Although the lower slopes are not, as a whole, entirely devoid of springs, and although what bottomland there is is fully exploited, there are districts which have no springs, no local streams, and no alluvial soil. One such district is al-Qurnā. This district is located about halfway between the large urban centers of Beirut and Tripoli, and the main highway and only railroad between these cities pass through it. This route has been used ever since the advent of man in the area, but the present paved highway dates from about 1920, while the railroad was built by the British army in 1942. Also of very recent date are the automobile roads within the district. The road from Be'ādīn to Ghazzīr is paved, and has been

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Physical Description of Area.

361 The coastal plain in the Kasmie area is bounded by the Mediterranean Sea on the west and
332 the Lebanon range on the east. The climate is Mediterranean with dry summers, nearly all of the
134 rain falling between October and May. The soil is chiefly a heavy clay. Much of this coastal area
941 is suitable for irrigation. While some of the land is rocky and in the United States would not be used for farm land, nearly all land capable of cultivation has been brought under the plow. The steeper slopes are preserved from serious erosion by rock wall terraces. The climate is favorable to the growth of temperate and sub-tropical crops. Citrus fruits, bananas, vegetables, and cereal crops are found in abundance.

361 The major markets for the products of the five villages are Beirut and Saida. All of the project
491 and control villages are linked to the Tyre-Saida-Beirut main coastal road by gravel surfaced roads except for Loubya and Salamiyeh, which are dependent upon trails. In no case is the dirt road more
487 than two miles from the main road. The traffic on this road is heavy and trucks and buses are
494 frequently available for taking products to Saida or Beirut. These towns are 12 and 42 miles respectively distant from 'Adloun, the most southerly village.

Village Government.

622 The five villages included in the Kasmie Rural Improvement Project have a similar form of
623 local government. Each village has a mukhtar (mayor) who is elected in a more-or-less democratic
471 manner. In each village there is also a board of aldermen or village elders. This board is also
654 elected by ballot and it consists of from two to six members. The mukhtar is generally the largest landowner or operator and one of the wealthiest men in the village. The aldermen as well are among the more well-to-do villagers. However, the concept of wealth is relative. Often the buildings owned by local villagers may be large in comparison with others in their own community, but small indeed when compared to the size of buildings in the village controlled by persons living outside the village. The common fellah does not enjoy representation by his peers in this area whether he has such aspirations is not known.

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twenty degrees of latitude. The desert in Syria is of rock and gravel more than of sand, and there are hills rising above 3,000 feet both north and south of Palmyra; more than a third of the total area of Syria is steppe or desert.

Rivers

The Orontes flows from the northern part of the Biqaa through the lake of Homs (which holds about 260 million cubic yards of water) to Hama and through the Ghab depression to Turkey. The Litani rises not far from the Orontes but flows at first southward and later west through a deep gorge in the Lebanon mountains into the sea between Tyre and Sidon. The Euphrates runs through Syria for about 430 miles and has, as tributaries from the north, the Balikh and the Khabur. It is on the Euphrates and its tributaries that there is the best prospect of developing hydro-electricity and irrigation.

Climate[1]

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Over this diverse scene the temperatures vary in the year from below freezing to above 100°F., and on the same day it is possible to ski near the cedars of Lebanon and swim in the sea at Beirut. The rain, which in most places comes between November and February, varies from almost nothing in the desert to about 40 inches a year in the mountains. In the coastal strip the winters are not severe but there is high humidity and small diurnal variation in the summer and this makes the season seem unpleasant and prolonged. In the mountains the snow lies on the topmost peaks for most of the year and the road from Beirut to Damascus is blocked by snow at times in most winters; in the summer the days are hot but the nights are cool enough to draw up to the mountains most of the inhabitants of Beirut. The plateaux and desert have an inland climate with low humidity and higher extremes of heat and cold. Aleppo has greater extremes than Damascus but in both cities there is a distinction between the four seasons: spring from mid-March to mid-May, summer from mid-May to the beginning of October, autumn in October and early November, and winter from November to March.

The People

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Official statistics showed that in 1951 the populations of Syria and of Lebanon were 3,309,137, and 1,393,041 respectively. Over half the inhabitants are engaged in agriculture, about half a million are nomads, and the rest live in towns. The

[1] See table, below, p. 500.

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183 through Latakia province in Syria. The southern half is watered by the Litany River, which, fed by streams from both ranges, runs south and then west, entering the Mediterranean near the ancient town of Tyre. The western slopes of the Lebanon Mountains are scarred by the valleys of numerous small rivers which empty into the Mediterranean. The majority are seasonal, but a few are perennial, the most important being the Nahr Abou Ali, near Tripoli; the Nahr Ibrahim; the Nahr el Kelb and the Nahr Beirut, near Beirut; and the Nahr el Awwali, north of Sidon.

184 The climate varies with the altitude and the proximity to the sea. The coastal belt has an annual rainfall of 25 to 35 inches, with a gradual diminution from north to south. The maximum precipitation occurs in the winter, usually from November to April, while the months from June to September are usually rainless. The duration of the transition period and the volume of rainfall fluctuate from year to year. The rains are often torrential and concentrated within a few days of each month. A slight increase is encountered on the seaward slopes of the Lebanon range, and the higher [illegible] are covered with snow throughout the winter. The mountains intercept the moisture-bearing winds from the Mediterranean, however, with the result that the rainfall decreases progressively toward the east. It rarely exceeds 20 to 25 inches a year in the Bekaa, and is appreciably less in the Anti-Lebanon Mountains.

The effect of the altitude is reflected most markedly in the temperatures: they are usually 15° to 20° F. lower in the western mountain villages than along the coast. The

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mean temperature at Beirut ranges from 54° to 65° F. in January and February and from 78° to 83° F. in July and August. The corresponding mean maximum temperatures average 63° to 68° F., and 88° to 92° F., respectively; the mean minimums, 48° to 52° F., and 70° to 74° F., respectively. The daily range approaches 10° to 15° F. in the summer and somewhat less in the winter. The relative humidity reaches 70 to 75 per cent during the summer and the winter months, but drops to 41 to 46 per cent in the transition periods. In general, the temperatures in the Bekaa are comparable with those of the littoral region, but the seasonal and the daily fluctuations are greater, while the humidity is lower.

POPULATION AND SOCIO-ECONOMIC CONDITIONS

Population

The population of Lebanon was estimated at about 1,229,330 in 1948, an increase of over 400,000 since the last census in 1932. The people are of mixed ethnic origin, although ancient Semitic and Arabic strains predominate in all parts of the country. Lebanon occupies a unique position among the Arab states, in that Christian and Moslem elements are almost equally prominent, both numerically and politically, among the indigenous populations. The official statistics are compiled on the basis of religious affiliations, emphasizing the vital role of the different communities in the life of the State. The Maronites, Catholics who adhere to eastern forms of ritual but have acknowledged allegiance to the Vatican since the 12th century, numbered around 350,000, or almost 29 per cent of the population, in 1948. They represent the largest single group, and are concentrated to a considerable extent in the coastal mountain districts from Tripoli to Sidon. The remaining Christian minorities included about 151,330 Greek Orthodox, 33,400 Greek Catholics, 41,000 Armenian Orthodox, 13,630 Armenian Catholics, 13,000 Protes-

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This has been achieved by increasing production of fruit and vegetables, for both of which Lebanon has great natural advantages. The topography of the country and the varied distribution of rainfall provide a diversity of climate which makes it possible to grow tropical fruits, sub-tropical fruits and fruits of the temperate zone. Soils are also sufficiently varied to suit a wide range of crops. Water is usually available in sufficient quantity, either as rainfall or from small-scale irrigation schemes. Plant diseases and pests are less prevalent than in most parts of the Middle East. The density of the rural population has made it profitable to concentrate on labour-intensive crops, while the relatively high level of education in country areas has encouraged innovation. The broken nature of the land has prevented large-scale mechanization, except in the plains, and has favoured crops which require little land, as has the prevalence of small-scale ownership. 1/ Finally, Lebanon's location has given it access to several important markets, such as Egypt for deciduous fruits, Syria and the Persian Gulf area for wet fruits and vegetables, Palestine (until 1948) for vegetables, and Europe for early ripening varieties of citrus fruit and apples.

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The expansion of fruit and vegetable crops was made possible by heavy capital investment. New terraces were built on mountain slopes, and old ones were repaired and strengthened. Various small-scale works carried out since 1948 have substantially increased the irrigated area. The use of selected seeds has considerably increased, as has that of chemical fertilizers. Before the Second World War, some 1,000 tons of chemical fertilizers were imported into Lebanon and Syria yearly. In 1947, Lebanon alone used 5,500 tons 2/ and 1952-53 imports into Lebanon averaged 25,000 tons. Lastly, there has been a rapid expansion of refrigerated storage space facilities. 3/ The greater part of the necessary capital came from outside agriculture, especially from commercial profits and savings earned in emigrant; the irrigation works were financed through the budg

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The rise in output of fruit and vegetables may be illustrated by citrus fruit, which increased from 71,000 tons in 1944 to 107,000 tons in 1954 and

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1/ No general figures on land distribution are available but on the basis of information gathered in the course of a village survey jointly undertaken in 1953 by the Lebanese Office of Statistics and the United States Foreign Operations Administration, the following estimate may be made: some 10 per cent of the land is in holdings of 100 hectares and above and 15 to 20 per cent in holdings of 10 to 100 hectares; the total number of large and medium holdings is 1,000. The remaining 70 to 75 per cent belongs to 150,000 smallholders, each of whom has less than two hectares. There are few landless peasants, and most of these have land from the larger owners ("Proceedings of the Agricultural Credit Conference", Beirut, 10-14 October 1955).

2/ Eric Hannelius Dick and partners, The Economic Development of Lebanon, Beirut, 1948, page 45. A breakdown showed that 40 per cent consisted of nitrogenous fertilizers, 33 per cent of superphosphates and 12 per cent of potash. Some 80 per cent of the total was applied to potatoes, 10 per cent to other vegetables and 5 per cent to fruit.

3/ The present capacity of refrigerators is estimated at over one million cubic metres, or about 2,000 tons. In Commerce du Levant, 4 October 1954. [illegible] planned to refrigerate [illegible] tons in 1955, and has [illegible] tons in 1956, and has consistently increased since then.

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For information on the topography, climate, agriculture, mineral wealth, railways, settlement pattern, productive capacity of the economy, and trade of the Levant coastland, see M[illegible]Middle East, cat. 116, 2d: Fisher, pp. 371-436.]